CITY OF NEWTON, MASSACHUSETTS

Department of Planning and Development
Michael J. Kruse, Director

David B. Cohen
Mayor

cd bg
newton community development block grant program

DATE: March 10, 2009

TO: Newton Corner Advisory Committee and Interested Citizens

FROM: Danielle Bailey, Community Development Planner

SUBJECT: January 27th Meeting Summary

Meeting Attendance
January 27, 2009

Members:
Richard Belkin, Chair
Ald. Scott Lennon
Ald. Carleton Merrill
Patty Walsh Greene, Vice Chair

City Staff:
Danielle Bailey, Community Development

Guest:
Jini Fairley, Mayor's Committee for People with Disabilities
Dave Greenberg, Vanasse Hangen Brustlin, Inc.

Interested Citizens:
Grace Breslin
Steve Carter
Tom Coan
Carol Connolly
Jerome Grafe
Jennifer Greenberg
Pat Rand
Peter Smith
Gary Sparrow
Janet Sterman
Jay Walter
Laurie Wolfe

PROJECT PLANNING

Newton Corner Pedestrian Improvements

Dave Greenberg of Vanasse Hangen Brustlin, Inc. (VHB) attended to provide follow-up recommendations for pedestrian safety improvements on Centre Street between Centre Avenue and Richardson Street.

At the last meeting, the advisory committee agreed to keep the crosswalk in the same location at Richardson Street and Centre Street and improve safety by installing yellow flashing beacon signals there. Mr. Greenberg reminded the group that the intersections of Centre-Richardson-Vernon would not meet the state warrants to justify installing a full traffic signal (one of the warrants is that at least 190 pedestrians must cross per hour).

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There are two styles of flashing beacons: 1) post-style which are placed on either side of the street, or 2) overhead-style on a mast arm. The group is concerned about maximizing pedestrian visibility and therefore prefers the overhead signals on a mast arm. When the signals are not in use, the lights would be blank.

Regarding triggering the signals, there are several options. Two are passive detection: 1) a microwave sensor is placed above the crosswalk that captures any movement by the crosswalk curb cut, and 2) infrared sensors housed in detection bollards that pick up movement as people walk through the set of bollards. Under the third option, which is not recommended by VHB, a pedestrian presses a button that activates the flashing beacons. Though not illegal, having push buttons is strongly discouraged because you do not want to convey the expectation that cars would stop, like at a traditional intersection. VHB would only design a flashing system with push-button detection upon written request from the City. These flashing signals are merely warning devices; cars are supposed to stop for all pedestrians in the crosswalk but this type of signal does not guarantee that cars will stop. Mr. Greenberg surmised that it is not uncommon for people to ignore buttons and cross whenever there is a break in traffic. With passive detection methods, there may actually be more usage of the signals because the sensors detect everyone.

The group discussed the pros and cons of the various detection options. It was asked about the effectiveness of one style over another. Mr. Greenberg said that he was unaware of any studies. VHB has generally heard positive feedback about the bollard style provided that snow removal is maintained. If there are large snow piles, it can interfere with the sensors causing the flashing lights to remain on continuously until the snow is removed. The overhead sensors are aimed at the apron of the curb cut. It would be possible for someone to miss the overhead sensor if they cut corners. With the bollards, people eventually learn to pass through the bollards to initiate the signal. The issues of vandalism and/or damage were raised. VHB thought that the bollards are generally strong pieces of equipment but vandalism and damage are possible but he has not heard many reports of this. The overhead sensors are more protected from petty vandalism and damage in this respect. As far as effectiveness goes, the infrared detection in the bollards is instantaneous and more consistent than the overhead microwave sensors which can pick up random movement and occasionally produce false positives, like from litter blowing by or a car too close to the curb.

Jerome Grafe, a transportation planner, spoke about his preference for a passive detection approach, agreeing that many people skip the push buttons, and those that might press it may possess a false sense of security.

Mr. Greenberg shared that the City of Cambridge has eliminated all push buttons at intersections. The crosswalks are now all concurrent with traffic (pedestrians cross parallel with the traffic) and the walk signs come on every cycle (rotating between the different traffic flow). This concurrent pattern with pedestrians and motorists moving in the same direction is becoming more common even in heavily congested areas. However, concurrent crossings are not ideal for all locations.

It was asked about the cost comparisons of the two styles. Mr. Greenberg said that the post-style flashers with overhead microwave sensors cost about $15,000 which includes the cost of the equipment and the conduit in the road. This price does not include crosswalk striping, curb cuts or street signage. The overhead flashing lights on the mast arm with detection bollards costs about $25,000-$30,000. Again, this price does not include crosswalk striping, curb cuts, street signage or other necessary civil engineering work.

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The lights would be programmed to flash based on a formula of 3-4 feet per second, measured curb to curb (for a 40 ft. wide road, the lights could flash for 10-13 seconds). There is no audible component to any of the flashing yellow systems. Ms. Breslin reported that the timing of the crosswalk at Park and Tremont Streets is too short for disabled persons and she hoped that the cross time could be lengthened. Staff will relay this request to the Traffic Engineer.

Again the group expressed interest in designing a flashing system that will allow a red light in conjunction with two yellow lights to strengthen the effectiveness as a warning device. VHB showed the group an image of this type of flashing beacon (called the HAWK). It is not yet approved in Massachusetts but that preparing a design to accommodate this change in the future is not a problem.

It was asked what the width would be between the bollards. Mr. Greenberg replied that there is not a set distance but that it would be dependant upon site constraints and how the curb cuts are designed, but they could be sited as much as 18 feet apart.

Staff relayed their conversation with the Traffic Engineer about the flashing beacons at this crosswalk and even adding a neck down (curb bump out) to improve motorists' visibility of pedestrians. The Traffic Engineer thought this proposal seemed reasonable to explore, particularly on the western side of Centre Street, abutting the businesses. Any roadway alterations would require Aldermanic approval; this process can sometimes go more quickly if there are other funds available for implementation like CDBG money. There is some concern about a neck down on the eastern side (next to the park) as visibility is much better and could be more vulnerable to damage by snow plows. Staff will confirm the parking regulations along Centre Street and determine if creating a bump out(s) would result in a loss of parking. Ms. Sterman mentioned that there is an example of a bump out by the post office on Galen Street in Watertown.

There is no firm cost estimate on a neck down but for planning purposes staff estimated that each neck down could add $10,000 to the project cost- $20,000 if both sides had neck downs. Several offered their support for a neck down on the western side of the street by the businesses to increase pedestrian visibility and shorten the crosswalk, as well as calm the traffic. Others expressed concern about the increased cost and additional approvals. Mr. Grafe countered that having yellow flashing beacons at the Centre-Richardson crosswalk is good but having the bump-out(s) makes the crosswalk much better, more effective and safer.

The accessibility requirements were discussed. Mr. Greenberg thought that both curb cuts would likely need to be replaced to be brought up to the most recent codes. Using VHB's conceptual plan, the City's Engineering staff would develop the construction plans and ensure that accessibility can be met and address other issues such as storm drains, etc. In many cases, the DPW crews themselves will design and build in the field.

A member asked why this crosswalk is getting so much attention and the Circle is still suffering. One response was that the problems and costs plaguing the Circle are too big for the CDBG program but that this crosswalk, which is related to the problems of the Circle, could be tackled by the CDBG program. The reasoning is to chip away at the problems that are within our abilities.

In summary, the Committee wanted VHB to prepare a design and cost estimate for an overhead flashing beacon system with detection bollards and having an alternate plan showing a bump out(s). The NCAC voted to release up to $8,500 for additional conceptual planning by VHB for the Centre-

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Richardson crosswalk safety improvements. It was emphasized that these plans are not ready for implementation pending further review by the NCAC.

The conversation moved north to the Centre Street-Centre Avenue intersection. VHB briefed the group on the current conditions of the intersection. During previous NCAC meetings, the committee agreed that separating the pedestrian phases is advisable. VHB developed a phasing plan and it has been submitted to the City. It will be programmed at no cost to the CDBG program as soon as a new traffic maintenance contractor is hired.

Under the new phasing plan, when someone wants to cross Centre Street, traffic will be stopped on Centre Street and northbound Centre Street traffic will see a STOP HERE ON RED sign before the crosswalk. Traffic will flow on Centre Avenue, except for the right lane which will likely have a red right turn arrow and a sign saying NO TURN ON RED.

There is still much concern about people ignoring the lights, arrows and signs. This is primarily an enforcement issue but there is much room for improvement and ways to raise motorists' awareness of the pedestrian crossings. Mr. Greenberg said that most people eventually do adjust to the changes over time.

The crosswalk times were discussed. VHB explained that if no one has pushed a pedestrian signal button for a while, then the pedestrian crossing phase will be activated very quickly. However if a button has been pushed recently, then there could be a 40-90 second wait (depending on how the individual intersection is programmed) until the pedestrian phase comes through the cycle again.

On eastbound Centre Avenue, it was noted that one of the problems with the cars stopping in advance of the crosswalk is that the stop line is around the curve. Perhaps there should be advanced warnings signs in addition to STOP HERE ON RED or NO TURN ON RED. For greater emphasis, another option is to have NO TURN ON RED LED lighted sign placed below the red arrow.

The group discussed the Centre Street crosswalk and how it is currently separated into two diagonal crossings divided by a traffic island. Some thought that altering the shape of the crosswalk would be too costly and complicated and that it is not used enough to warrant the changes. Jini Fairley, member of the Mayor's Committee for People with Disabilities, weighed in with her opinion on this awkward crossing. She felt that it is confusing, difficult to navigate, and does not include tactile warning strips which help sight-impaired persons to know when they are leaving the sidewalk and entering a crosswalk and the street. The question was asked if the island is necessary; is it helpful to have it as a refuge? She said that the island is not an important feature but rather that the crosswalk be a straight as possible and that the curb cuts are angled in the direction of the crosswalk. One challenge at this intersection is that all the curb cuts are on curved portions of the road making aligning the curb cuts and crosswalks a major challenge. One possible scenario given these difficult site constraints is to create a more straightened crosswalk through a granite-edged cut through on the island. Ms. Fairley emphasized that the best way to communicate these changes are through the tactile warnings. If there are no tactile warnings, users with visual impairments will remain confused. If a simple solution cannot be reached, a cut through could work and be navigable if the tactile warnings properly communicate to the users.

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She also hoped that any upgrades to the audible pedestrian signals would either have longer cuckoos during the walk phase or some type of beaconing sound after the initial walk phase has passed to guide people throughout the length of the crossing. Staff told the group that there are currently CDBG Access funds budgeted to improve the audible pedestrian signals. With respect to paying for code-compliant curb cuts, the funds would either come from the CDBG Neighborhood Improvements program or the CDBG Access program. The Access program has an annual curb cut project but this intersection is not on their list for replacement. If the committee wished to apply for these funds, representatives of the NCAC must go before the Mayor's Committee to make a formal request. Ms. Fairley said that the Mayor's Committee would like to collaborate and have additional input before the plans are finalized as their group has been concerned about this intersection for many years.

As recommended by the Metropolitan Planning Organization's study, there is strong community support for making the Centre-Centre traffic signal a fully operational signal with four separate and sequential phases: 1) Centre Avenue, 2) Centre Street, 3) Centre Street pedestrian crossings, and 4) Centre Avenue pedestrian crossing. Today there are only two phases. The City will add the third phase – a second pedestrian phase as soon as a traffic maintenance contractor is under contract. The pedestrian phases will only be activated when a pedestrian pushes the button.

After relaying the Committee's interest in making this a complete intersection, the City's Traffic Engineer agreed that the intersection could be upgraded as a trial. This trial would be primarily a safety improvement for vehicles and pedestrians but could prove detrimental to traffic flow. It is clear that traffic flow will be slowed but the question is will it be at a level that we can all live with. VHB suspects that the Turnpike backups will be severe and the queues on Centre Street will be past Church Street. The trial will cost approximately $20,000 – $10,000 for planning and design work for a phasing plan by VHB, and $10,000 for various new equipment needs and labor costs. Using Synchro and examining the data during peak hours, VHB will develop a phasing plan to maintain traffic flow as best as possible. However, the program has limitations as it cannot accurately predict how many times pedestrians will press the buttons to cross during any given hour.

Attendees questioned the need for a trial when a professional study lists converting the intersection to a full traffic signal as one of the main recommendations. Staff and VHB replied that the projections reported in the study are only projections. Until the changes are made in real-life situations, there is no way to tell if the projections will be the same, better or worse. If things are substantially worse, the traffic signal would revert to current conditions where a green ball shows for both Centre Street and Centre Avenue. VHB's challenge would be to create a plan that manages the congestion and ideally distributes any delays equally. The City is also looking for before and after data so that there can be some sort of measurement of how well the full signal is working. Though frustrated about spending money for a trial, the group is committed to making progress on this intersection. They felt it was imperative to take action even though there is a risk involved.

The Centre-Centre traffic signal is not fully actuated meaning it is not sensitive to the actual traffic at any given moment. There are no loops in the road or a video detection system so the signal phases are pre-timed. There can be several timing plans for different times of the day so VHB will try to anticipate the flow and set the times accordingly.

When asked about modeling traffic proposals, Mr. Greenberg said that many transportation planners utilized a program call Synchro but he felt that it is limited in its ability to predict. The best way to test changes is to do a trial in the field. Vehicle counts were last done in 2004. It may be

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prudent to obtain new vehicular counts. It is still hoped that pedestrian counts can be taken this spring once the weather is more favorable.

Mr. Belkin inquired if it was feasible and/or advisable to turn off the Centre Street phase during peak hours so that traffic flow remains as it currently is. During off-peak times, Centre Street would have its own phase and right-of-way. The logic is that the situation would not be any worse than it is today. Staff relayed that the Traffic Engineer is not supportive of this proposal as it would contribute to driver confusion that the green light has different meanings at different times of day. It was then suggested that a flashing yellow light could operate during peak times. VHB responded that this was not appropriate either according to the standards of the Manual on Uniform Traffic Control Devices (MUTCD). It was suggested that once the trial was implemented, it is highly unlikely that the traffic signal would revert to the current situation unless things were unbearable because the City would be going from a compliant traffic signal to a non-complaint signal.

As part of the trial, the group would like to see two designated lanes on northbound Centre Street starting around Vernon Street whereby the right lane would be for right turns only and the left lane would be for through movements into the Circle.

It was mentioned that based on observation of traffic patterns in the Circle, sometimes drivers in two lanes make the right turn from Centre Avenue to Centre Street. Incorporating a double right could potentially help with some congestion.

The NCAC spent some time discussing the Massachusetts Turnpike Authority. Making the Centre-Centre traffic signal changes could very well impact the Turnpike. Others pointed out that a backup on the Turnpike caused by this safety upgrade might prompt the MTA to give more attentions the problems in the Circle and hopefully become a willing and active collaborator. Some felt that the MTA does not care enough about the communities surrounding the Turnpike. Some would like to see the exit ramp at Centre Avenue signalized, ideally to be paid for by the MTA.

There is approximately $46,500 remaining in the FY07 Newton Corner Pedestrian Improvements project. $8,500 was set aside for VHB to develop plans for the Centre-Richardson crosswalk, leaving $38,000 uncommitted. The NCAC then recommended that $20,000 be used for the Centre-Centre traffic signal trial ($10,000 for VHB and $10,000 for equipment and labor). The remaining $18,000 will be used to upgrade the Centre-Centre crosswalk for improved accessibility. No cost estimate has been prepared but if the cost exceeds the $18,000 budget, the NCAC may be able to request CDBG Access funds as a supplement.

Staff and VHB will work to get a new contract so that the trial could happen this year. No Aldermanic approvals are required for traffic signal changes as the Traffic Engineer has the authority to make adjustments to traffic signals.

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At the last meeting, the NCAC committed nearly half of the FY2010 allocation ($160,000 estimated) to Charlesbank Park ($75,000) and $5,000 to Church Street Traffic Calming Phase 2 to cover the needed costs for the new traffic island between the entrance to the YMCA and Oakland Street. $80,000 remains to be committed. The group thoroughly discussed the proposed projects ideas of highest priority. Developing new project ideas and budgets is required for the Annual Action Plan, which is due to the Department of Housing and Urban Development prior to the start of FY10. Staff requested that 1-2 NCAC members attend the Annual Action Plan public hearing to present the community's proposed projects on April 6, 2009. Ms. Greene and Mr. Belkin offered to attend on the NCAC's behalf.

The group revisited the Centre-Richardson crosswalk. Design funds were committed from the FY07 funds however the implementation funds had not yet been set aside. The NCAC recommended $30,000 for the implementation of the Centre-Richardson crosswalk safety improvements.

As Newton is named the Garden City, there were many advocates for new and replacement tree planting on City sidewalks and in parks. The Director of Urban Forestry in the Parks and Recreation Department drove around the streets in the Newton Corner target area. Based on his windshield survey, 36-65 trees could be planted at an estimated cost of $500 per tree ($18,000-$32,500). The group debated the number of trees and decided use the midpoint- 45 trees at $22,500. One attendee wondered how much more it would cost to have the tree contractor water the trees for two years instead of one. Staff will make this inquiry with the Director of Urban Forestry. The group can assist in scouting locations but the Director of Urban Forestry will approve the final locations as well as choose the species of tree. One suggestion for new plantings was on the City-owned strips at the corner of Nonantum Place and Jefferson Street. It was hoped that some trees could be planted in the commercial district but this is not allowable with CDBG funds as they must primarily benefit the residential areas of low- and moderate-income persons.

After choosing the tree planting project, there was approximately $27,500 remaining in FY2010 funds. Carleton Park and Boyd Park had not yet been addressed. The improvements to be made at Boyd Park, primarily drainage improvements, were not well defined therefore a cost could not easily be prescribed.

Staff spoke with Parks and Recreation and inquired what could be done with $10,000 at Carleton Park. Stephanie Pelkowsky told staff that very little could be done once you factor in the purchase of equipment, preparing the base whether by raising it or lowering it, and labor. She thought that something more substantial that would make an impression could be done with $15,000-$20,000. Staff recommended that a master plan be done similar to Charlesbank Park but on a much smaller scale. There are issues in the park such as grades and poor tree placement that prevent the park from reaching its potential. A comprehensive look at the park might be a good idea. Staff thought that a master plan could be prepared for $5,000 or less. One person thought that a Newton Serves event there would be great.

A few others advocated that Church Street needs more money as only one piece of the plan is being funded. There are still no pedestrian crossings planned and other curb adjustments that could be made. The committee voted to split the remaining $27,500 between Carleton Park and Church Street ($13,750 each). At the last meeting, the NCAC already committed $5,000 for Church Street

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for gap funding for the traffic island, which brings the total for Church Street Traffic Calming Phase 2 to $18,750.

After careful deliberation, the NCAC made the following recommendations for CDBG Neighborhood Improvement projects for FY2010:

Church Street Traffic Calming	$	18,750
Carleton Park Improvements	$	13,750
Charlesbank Park Improvements	$	75,000
Newton Corner Tree Plantings	$	22,500
Newton Corner Pedestrian Improvements- Centre & Richardson crosswalk	$	30,000
Total FY2010 Estimated Allocation for the CDBG Neighborhood Improvement Program	$	160,000

PROJECT UPDATES

Charlesbank Park Improvements
Farlow Park and Chaffin Park Improvements
Church Street Traffic Calming
Due to time constraints, this section was not covered.

OTHER BUSINESS, APPROVE MINUTES & SET NEXT MEETING DATE

This item was not discussed.

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